



## Original communication

## Forensic experience of Saudi nurses; an emerging need for forensic qualifications



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## ABSTRACT

Forensic nursing was recognized as a nursing subspecialty after the perceived need for forensic nurses to bring about their nursing duties while at the same time helping legal authorities to deliver justice. With the increased rate of cases that are presenting to the forensic centers in Saudi Arabia, there was a need for the presence of nurses to work side by side to physicians. This study was aimed at determining the forensic qualifications of nurses working in emergency departments in the area of Dammam and their knowledge about principles of forensic nursing.

A self-administered questionnaire was distributed to registered nurses who are working in Emergency departments of secondary hospitals in the area of Dammam. Questions included knowledge, awareness and attitude toward forensic nursing.

A total of 96 participants responded to the questionnaire with females representing 78% ( $n$ : 75). Diploma was the highest earned nursing degree in 95% ( $n$ : 91) of participants. Only 33% ( $n$ : 32) were aware of the term forensic nursing and the majority of the respondents gave invalid or didn't know the answers to knowledge questions. A total of 77% ( $n$ : 74) agreed that they are not adequately trained for handling forensic cases.

Saudi nurses need forensic education. The presence of qualified forensic nurses would help delivering optimal forensic services and would assist in bringing justice.

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## 1. Introduction

Forensic medicine was established in Saudi Arabia after recognizing the need for the application of medical sciences in conducting social justice. It involves postmortem examination together with examining living cases of sexual and physical assault.

This branch had witnessed many changes since the appointment of the first specialized forensic medicine doctor in the city of Riyadh, 1968. A big leap in this specialty was seen after the establishment of the Saudi specialty certificate in forensic medicine, 2006. Male and female national specialized forensic medical examiners have graduated and are working in different centers throughout the country.<sup>1</sup>

The first specialized forensic clinic started receiving child and women complainants of assault in 2007. Over the following years there was an obvious increase in the rate of presenting cases.<sup>2</sup> Forensic physicians, who recognized that the care of complainants runs side by side to the need for conducting social justice, felt the demand for the presence of a nurse working in such clinic. While legal authorities find general nurses working with forensic cases as advocates for the complainant, the nurses in turn find legal authorities as invaders of patient's privacy.<sup>3</sup> The presence of specialized forensic nurses narrowed this gap.

Forensic nursing was first recognized in USA in 1990.<sup>4</sup> The forensic nurse acts as a liaison between physicians and criminal justice system, and being in the place of first contact with the patient; she is expected to conduct a proper evaluation and collection of evidence, which other wise will compromise the legal proceedings.<sup>5</sup>

Other duties of a forensic nurse include; suspecting violence, care of trauma, maintaining chain of custody and providing

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support.<sup>3</sup> Distracting the child victim from insulting situations and preparing him/her to the examination needs special skills that a forensic nurse can provide. Testimony at the court is a less known duty of the forensic nurse being a member of the forensic team.<sup>1,5</sup>

In Saudi Arabia, general nurses are faced with forensic cases as part of their routine nursing work. Although they are involved with the assessment and evidence collection, however, no specialized forensic nursing programs or training courses are provided to support their work. Studying the forensic awareness and qualifications of Saudi nurses could emphasize the importance of establishing specialized programs of forensic nursing in Saudi Arabia and improving the forensic practice in the country.

Up to the knowledge of the authors, no study has been conducted in Saudi Arabia to assess the forensic qualifications of Saudi nurses.

The study was constructed to determine the need for qualified forensic nurses to handle victims of abuse in Saudi Arabia. The objectives were to assess the knowledge of registered nurses in Saudi Arabia about forensic nursing, to assess the qualifications of registered nurses whom their work involves forensic practice, and to evaluate the attitude of registered nurses towards forensic nursing specialty.

## 2. Methodology

A descriptive analysis study was conducted in the area of Dammam and included all secondary hospitals (Maternity and Children's Hospital, Dammam Medical Tower and Qatif Central Hospital). Registered Saudi nurses of pediatric, OBGYN and general ER were included in the study.

A questionnaire was constructed and included demographic data, awareness and knowledge of forensic medicine and nursing and the attitude of registered nurses towards forensic nursing specialty. Questions for the attitude were adapted from a published pilot study<sup>4,6</sup> while the principal author constructed a pilot assessment of knowledge, which focused on principles of forensic nursing. The co-authors then reviewed the questionnaire.

The questionnaire was translated into Arabic language to ensure better understanding of the questions. It was then distributed to head nurses of pediatric, gynecology and general ER departments of targeted hospitals to review it and give comments about its content. The numbers of registered ER nurses in each ER department was taken from the head nurses to determine the number of questionnaires to be distributed. The questionnaire was reconstructed taking in consideration the suggestions of head nurses.

Authors distributed 140 questionnaires to the registered nurses of ER departments. The questionnaires were distributed and collected over a period of one month. Data was entered and analyzed using the SPSS program version 21.

Approval was obtained from the General Directorate of Health Affairs in the Eastern Province and consent was considered by agreeing to fill the questionnaire and submitting it while all information remained anonymous.

## 3. Results

The response rate to the questionnaire was 98% ( $n$ : 96). Median age (IQR) of the participants is 25 (23,28). Females represented 78% ( $n$ : 75) while males 22% ( $n$ : 21). The highest earned degree in nursing was diploma (two years after the high school) in 95% ( $n$ : 90) while 4% ( $n$ : 4) have baccalaureate degree (four years after the high school) and one participant had finished a master degree (a post graduate degree) (Fig. 1).

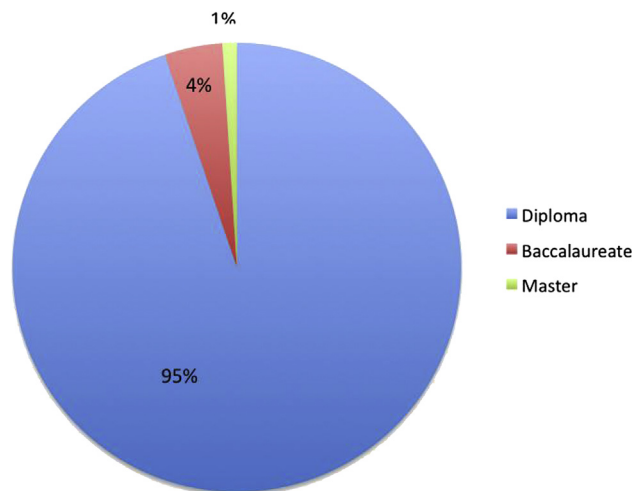


Fig. 1. Highest nursing degree.

Most of respondents 79% ( $n$ : 74) have 5 or less years of experience, the maximum experience was 18 years in one participant.

Majority 71% ( $n$ : 62) have most experience in general emergency department (ER) followed by 22% ( $n$ : 19) in OBGYN and 7% ( $n$ : 6) in pediatric ER (Fig. 2). Minimum number of handled legal cases was 0 while maximum was 200.

A total of 65% ( $n$ : 62) were aware of the term forensic medicine while only 34% ( $n$ : 32) were aware of the term forensic nursing. Awareness was more (52%) in more experienced nurses (6–20 years of experience), while only 29% in those with 5 or less years of experience. A percentage of 94% ( $n$ : 90) stated that they received no lectures on dealing with legal cases and 85% ( $n$ : 82) stated that they received no training on handling forensic cases.

Most of respondents 69% ( $n$ : 66) stated that there are standing protocols for dealing with forensic cases while 24% ( $n$ : 23) said there are no protocols and 7% ( $n$ : 7) mentioned that they don't know if such protocols exist at their institution or not. Most of the knowledge questions were answered by the majority as either invalid or don't know (Table 1).

Seventy-seven percent ( $n$ : 74) agreed that they are not adequately trained in forensics and 62% ( $n$ : 59) agreed that there is no time for forensic cases in ER setting. Fifty-two percent ( $n$ : 49) don't want to work with forensic cases because of legal liability while 49% ( $n$ : 47) were willing to practice forensic nursing in case it is present.

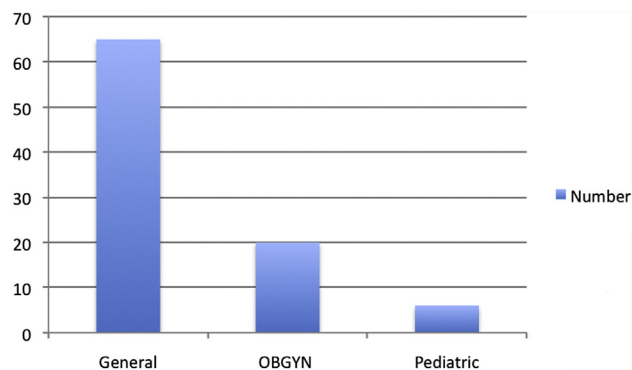


Fig. 2. The number of respondents according to emergency department.

**Table 1**  
Knowledge questions.

Questions		N (%)
1 When a complainant present to the ER with a history of sexual assault, the first thing a forensic nurse has to do is offering food and drink and a safe place to relax	Valid	No 47 (49) Yes 21 (22) DK <sup>a</sup> 25 (26)
2 Bruises over the knees are suspicious of child abuse.	Valid	No 26 (27) Yes 45 (47) DK 23 (24)
3 Tear of the lip frenulum is suspicious of child abuse.	Valid	Yes 43 (45) No 15 (16) DK 34 (35)
4 Forensic samples include saliva, blood and seminal stains.	Valid	Yes 76 (79) No 5 (5) DK 14 (15)
5 Long-term preservation of forensic samples is at room temperature.	Valid	No 35 (36) Yes 12 (13) DK 48 (50)
6 Collected forensic swabs should be sent to the hospital lab.	Valid	No 22 (23) Yes 30 (31) DK 44 (46)
7 Legal order alone is enough to conduct forensic examination and evidence collection.	Valid	No 7 (7) Yes 55 (57) DK 33 (34)
8 By giving consent to forensic examination, the complainant should continue examination till the end.	Valid	No 6 (6) Yes 63 (66) DK 26 (27)
9 In case of sexual assault, emergency contraceptives can be prescribed up to 3–5 days after the incident.	Valid	Yes 7 (7) No 8 (8) DK 78 (81)
10 Forensic swabs are kept in a special solution to prevent decomposition.	Valid	No 5 (5) Yes 56 (58) DK 33 (34)
11 In case of bite marks, skin is directly cleaned and sterilized.	Valid	No 24 (25) Yes 48 (50) DK 24 (25)
12 Clothes removed in the clinic for forensic analysis could be handled to the complainant to be submitted to the forensic lab.	Valid	No 22 (23) Yes 46 (48) DK 27 (28)

<sup>a</sup> Don't Know.

#### 4. Discussion

In an active emergency department, cases of interest to law enforcement present side by side to medical emergencies. These forensic cases include child abuse, elder abuse, sexual assault and domestic violence.<sup>3</sup> Majority of studied nurses had five or less years of experience, nevertheless, they are supposed to deliver optimal services to forensic cases. This increases the stressful busy work environment that they already have, keeping in mind that emergency situations considered by nurses as one of the most stressful factors coming only second to patient death or dying.<sup>7</sup>

Majority of respondents are aware of the forensic branch of medicine, but only 34% know about the term forensic nursing. This was more than that of the studied nurses in Bolu, Turkey.<sup>4</sup> The authors reviewed the curriculum of nursing college at University of Dammam and found that forensic nursing was not included. A demonstrator at the college stated that she didn't hear about forensic nursing and that she has no idea about the role of such nurse. This would explain the lack of awareness among other registered nurses.

Standing protocols for handling forensic cases in emergency room was set by hospitals according to some ER nurses but others do not know this. A number of them indicated that these protocols are vague and with no details. The mere presence of protocols doesn't add much if they are not understandable and applicable by nursing staff.

Questions of basic forensic knowledge, which should be known by any nursing staff dealing with forensic cases, showed a big deficit as 11 out of 13 questions of knowledge were answered by majority of participants falsely or by not knowing the answer. This could be attributed to the absence of specific training courses of forensic nursing.

Most pediatric ER nurses refused to fill out the questionnaire and reasoned that with the extreme workload they were exposed to. This was expected especially with the worldwide shortage of nursing staff as stated by the WHO,<sup>8</sup> which would put more pressure on working nurses. Nurses hence, find that forensic work is not their responsibility and that they are busy enough with the more important medical needs of patients, which was a similar finding in another study.<sup>6</sup>

There is a lot of controversy across countries regarding the role of nurses in general and nurses are faced with demands that are not part of their duties.<sup>9</sup> However, forensic cases often present as an emergency situation and nurses should suspect legal element in any medical urgent case<sup>10</sup> and handle it based on principles of saving lives while at the same time considering issues of legal interest. Well-trained forensic nurses could deliver forensic services while assisting the physician in the most serious conditions. Collecting evidence and documenting findings most of the time don't interfere with ABCs of life saving.

ER nurses view most of forensic conditions as a non-urgent that shouldn't be dealt with in a busy ER room and they agree that a specialized nurse who is forensically qualified should take care of these cases. They also find it important to add forensic nursing to the nursing college curriculum, and to consider it a nursing sub-specialty, findings comparable to Bolu study.<sup>4</sup>

Forty percent of participants find it uncomfortable to deal with legal cases, in contrast to another study.<sup>6</sup> Less than half of nurses don't want to work with such cases because most of these issues are considered critical by cultural standards. They don't want to be involved with families and are not willing to face added violence to what they are already exposed to in one of the most violent areas in the hospital.<sup>11</sup>

Many ER nurses are concerned with legal liabilities of dealing with forensic cases and this is expected from a staff that didn't receive any specific training or lectures and hence don't know what are their duties and responsibilities in facing such cases. Providing nursing staff with the basic legal information in handling forensic cases would give them confidence and comfort in practicing their duties without fear.

Interestingly, despite their fear of legal or cultural issues, most of the participants were willing to join this field. Some of the participants provided their names and contact numbers and asked to contact them once there are established specialized courses in forensic nursing, while others were so eager to know the valid answers to the knowledge questionnaire. This could be explained with the routine ER work and the desire to be involved in another area, which they think is interesting. Few male participants find that increasing income is an encouraging point that would change their views about dealing with legal cases.

#### 5. Conclusion

Forensic cases are presenting to all emergency departments and nurses are in the first contact with these cases. They are expected to deliver a proper service that wouldn't compromise the case legally.

Conducting specialized forensic nursing courses to nurses who are already facing forensic cases in the ER and providing training by

**Table 2**  
Attitude questionnaire.

Statement	Agree N (%)	Not agree N (%)	Indifferent N (%)
1 Forensic nursing should be added to the nursing curriculum.	74 (77)	2 (2)	20 (21)
2 Forensic protocols are important in ER setting.	90 (94)	1 (1)	5 (5)
3 Forensic nursing should be considered a nursing subspecialty.	77 (80)	1 (1)	18 (19)
4 I am not adequately trained to address forensic issues.	74 (77)	3 (3)	19 (20)
5 There is no time to worry about forensics in ER.	59 (62)	18 (19)	18 (19)
6 The patients medical needs are the most important.	62 (65)	8 (8)	25 (26)
7 I am uncomfortable dealing with victims of violence.	38 (40)	26 (27)	31 (33)
8 Forensics is really not my responsibility.	37 (39)	33 (34)	26 (27)
9 I don't want to deal with forensic cases because of legal liability.	49 (51)	17 (18)	28 (29)
10 I don't want to practice forensic nursing because it deals with critical issues in community.	38 (40)	33 (34)	25 (26)
11 I would like more training to deal with forensics in my practice.	66 (69)	14 (15)	15 (16)
12 I would like to practice forensics because it increases my income.	22 (23)	45 (47)	29 (30)
13 I would like to practice forensic nursing if such specialty was available.	47 (49)	23 (24)	26 (27)

forensic specialists would be positively reflected on the legal outcome.

Forensic sciences including forensic medicine are developing in Saudi Arabia at a rapid pace and establishing forensic nursing program would be a continuum to this growth (Table 2).

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Conflicts of interest  
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